NOAA's Office of Oceanic and Atmospheric Research

Where Science Comes to Life

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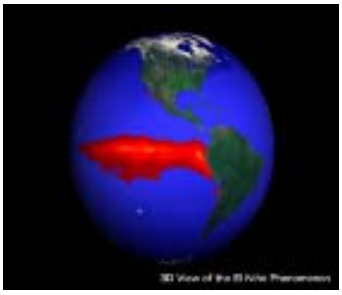

1315 East West Highway
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What does NOAA Research do for the nation?

The Office of Oceanic and Atmospheric Research (OAR), or "NOAA Research," is the research and development organization of the National Oceanic and Atmospheric Administration (NOAA). OAR works with NOAA's National Weather Service, National Ocean Service, National Environmental Satellite Data Information Service, National Marine and Aviations Operation, National Marine Fisheries Service, and external partners to improve NOAA services. It is through NOAA Research that we have better weather forecasts, earlier warnings for natural disasters, and an overall greater understanding of our oceans, climate, and atmosphere.

Our responsibility is to improve understanding and management of the environment through research in the areas of climate, weather, air quality, and ocean and coastal resources. NOAA Research explores the facets and trends of the environment that influence our future. Our research helps prepare the nation for the new challenges of tomorrow as our society and natural surroundings continue to change.

NOAA Research has made critical advances in environmental research in the past thirty years. Today, we are brokers of independent scientific knowledge completing the NOAA circle of research, prediction, and environmental stewardship.

Vision Statement

A Society that uses the results of our inspired research as the scientific basis for more productive and harmonious relationships between humans and their environment.

Mission Statement

To conduct research, develop products, and provide scientific information and leadership to foster NOAA's evolving environmental and economic mission.

Research Partnerships

Our diverse partners include other components of NOAA, other Federal agencies, universities, non-government organizations, and private industry. Long-term research partnerships are established as Cooperative Institutes under agreements between NOAA and participating universities and non-profit research institutions. NOAA Research partnerships provide additional scientific and technical expertise to help us serve customers within Federal, state and local governments, private industry, the general public, and the global community.

Selected Research Accomplishments

- Developed tools to provide reliable air quality forecasts in the U.S.
- Advanced hurricane models and monitoring to significantly improve hurricane track and intensity forecasts used by local forecasters, emergency managers, and millions of US residents.
- Discovered a key component in the formation of the Antarctic ozone hole and continue long-term monitoring, modeling, and analysis benefiting policy makers focused on the recovery of the ozone layer.

- Improved understanding of oceanic uptake of carbon emitted from human activities and enhanced models detecting the effect of increased carbon dioxide to better understand and predict global climate change.
- Developed a method to detect the presence of human adrenovirus, a cousin of hepatitis A, in watersheds.
- Taught marine safety and survival to more than 4,000 fishermen in 65 Alaskan ports, reducing fatalities by 50% over a period of 10 years.
- Reduced the threat of aviation accidents due to in-flight icing on aircraft surfaces by developing a ground-based remote sensing system to detect hazardous icing conditions.
- Advanced modeling of Lake Michigan beach contamination, making progress towards development of water quality forecasts for drinking water, beach closures, and harmful algal blooms.
- Developed a seamless mosaic of all 130 National Weather Service radars across the U.S. to provide data on storms and precipitation to private sectors, universities, and government.
- Led the development of environmentally responsible aquaculture technology, stimulating the start-up of new companies, new products, and new jobs valued at more than $100 million and producing more than 100 tons of high-quality marine fish with minimal environmental impacts.
- Built international and interagency partnerships to observe and assess the dramatic environmental changes in the Arctic and their impact on U.S. weather and climate.
- Increased knowledge of the South Pacific Ocean during a 10,000 nautical mile international ocean expedition that discovered new species, determined new ranges for known species, and gathered data on undersea volcanoes and the rare interface of life based on sunlight with chemosynthetic organisms.
- Assisted in eradicating the invasive “killer seaweed” *Caulerpa taxifolia* in California.
- Advanced the Global Ocean Observing System to 51% completion and brought the global surface drifting buoy array to its 1250 buoy design goal, making it the first fully implemented component of the Observing System.
- Developed CM2, one of the world’s best coupled climate models, and used CM2 to provide nearly 500 GB of data for the International Panel on Climate Change Fourth Assessment Report on Climate Change.
- Accurately predicted a 1 centimeter tsunami off the coast of Oregon on June 14, 2005, demonstrating the value of a Tsunami Forecast System prototype for improving the speed and accuracy of tsunami warnings.
- Contributed to developing an operational forecast tool for 6-10 and 8-14 day probabilistic climate forecasts.

Legal Mandates

Statutory authority for NOAA Research programs is varied.

- The National Weather Service Organic Act of 1890 provides non-expiring authority for NOAA’s atmospheric research programs.
- The National Sea Grant College Program was originally authorized in 1966. The Sea Grant Program Reauthorization Act of 1998 authorizes the National Sea Grant College Program, the Knauss Fellows program, and research on invasive species, oyster disease and harmful algal blooms.
- The Global Change Research Act of 1990 provided for the establishment of the US Global Change Research Program, an interagency program coordinated by the NOAA Research Office of Global Programs, which is currently integrating into the Climate Program Office.
- The Nonindigenous Aquatic Nuisance Prevention and Control Act, ratified in 1990 and amended in 1996, provides expiring authority for NOAA to fund research, prevention, and control activities relating to aquatic nuisance species.
- Additional authorities for NOAA Research activities in areas such as coral reef conservation, harmful algal blooms, aquaculture, air quality, and aviation can be found in a variety of legislation for broader purposes.

Budget and Staff

The fiscal year 2006 enacted budget for OAR totalled $379.9M. The fiscal year 2007 President’s budget request for OAR is $348.7M. OAR has 698 permanent Federal employees and hundreds of cooperative institute and contract employees.

For more information, contact:
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